

## CLAIMS

1. A biological substance-immobilized gel which comprises a gel containing 2%-7% by mass of N,N-dimethylacrylamide and a biological substance immobilized on and/or in the gel.
2. A biological substance-immobilized gel which comprises a gel having the following composition and a biological substance immobilized on and/or in the gel:

(a) N,N-dimethylacrylamide	2% to 7% by mass
(b) cross-linking agent	0.1% to 1.5% by mass.
3. The biological substance-immobilized gel according to claim 1 or 2, wherein the biological substance is a nucleic acid.
4. The biological substance-immobilized gel according to claim 2 or 3, wherein the cross-linking agent is a multifunctional monomer having at least two ethylenically unsaturated bonds.
5. The biological substance-immobilized gel according to claim 4, wherein the cross-linking agent is methylenebisacrylamide.
6. A method for preparing a biological substance-immobilized gel, which comprises immobilizing a biological substance on and/or in a gel containing 2%-7% by mass of N,N-dimethylacrylamide.
7. The method according to claim 6, wherein the gel is obtained by reacting 2%-7% by mass of N,N-dimethylacrylamide in the presence of 0.1%-1.5% by mass of a cross-linking agent.
8. A gel-filled hollow tube which comprises a hollow tube whose hollow space is filled with the biological substance-immobilized gel according to any one of claims 1 to 5.
9. The gel-filled hollow tube according to claim 8, wherein the hollow tube is a hollow fiber.

10. A method for manufacturing a biological substance-immobilized gel microarray, which comprises allowing a plurality of gel-filled hollow tubes according to claim 8 or 9 to be tied in a bundle and cutting the resulting tube bundle in a direction intersecting with the longitudinal direction of the tubes.

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11. A method for manufacturing a biological substance-immobilized gel microarray, which comprises the following steps:

(1) allowing a plurality of hollow tubes to be tied in a bundle;

(2) filling the biological substance-immobilized gel according to any one of claims 1 to 5 into the hollow space of each tube in the resulting tube bundle; and

(3) cutting the tube bundle in a direction intersecting with the longitudinal direction of the tubes.

12. A biological substance-immobilized gel microarray which comprises the biological substance-immobilized gel according to any one of claims 1 to 5, wherein the gel is arranged in multiple compartments.

13. The biological substance-immobilized gel microarray according to claim 12, wherein the surface area of each compartment is  $10^{-6} \text{ m}^2$  or less.

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14. The biological substance-immobilized gel microarray according to claim 12 or 13, wherein the compartments are formed by slots or through holes.

15. A biological substance-immobilized gel microarray which is obtained by allowing a plurality of gel-filled hollow tubes according to claim 8 or 9 to be tied in a bundle and cutting the tube bundle in a direction intersecting with the longitudinal direction of the tubes.

16. The biological substance-immobilized gel microarray according to claim 15, wherein the hollow tubes are hollow fibers.

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17. A method for detecting a target to be measured, which comprises reacting an analyte with the microarray according to any one of claims 12 to 16 and detecting the target in the analyte.

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18. The method according to claim 17, wherein the target to be measured is a nucleic acid.

19. The method according to claim 18, wherein the nucleic acid is 100 nucleotides or less in length.